CORRELATES OF SUCCESSFUL AGING: ARE THEY UNIVERSAL?*

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ABSTRACT

The analysis compared differing correlates of life satisfaction among three diverse population groups in Israel, examining background and health status variables, social environment factors, and activity indicators. Multiple regression analysis revealed that veteran Jewish-Israelis ($n = 2,043$) had the largest set of predictors, the strongest of which was health status. Among Arab-Israelis ($n = 609$), social visitation served as a significant base for life satisfaction. The predictors among the new immigrant group ($n = 751$) reflected the search for social ties beyond the immediate family. The analysis underscores the universal basis of successful aging, especially the contribution of health status. However, it also clarifies that the specific components of some of the general categories of predictors work in different ways among different population groups.

INTRODUCTION

A central goal of contemporary gerontology is to better understand the social processes of aging well (Vaillant, 2002). Clarifying the concomitants of well-being in later-life is an important step in the quest to promote successful aging (Chou & Chi, 2002; Fisher, 1995; Knight & Ricciardelli, 2003; Ohno et al., 2000; Strawbridge, Wallhagen, & Cohen, 2002). Accordingly, much recent research has

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examined the correlates of key well-being indicators, such as life satisfaction, morale, self-rated health, and positive affect (Bowling, Farquhar, Grundy, & Formby, 1993; Hilleras, Jorm, Herlitz, & Winblad, 2001; Inglehart, 2002; Kop, 1993; Stock, Okun, & Benito, 1994).

A related question that has not been sufficiently addressed in the literature is whether the path to successful aging is similar for different populations. That is, do people of different cultures and different social histories tend to age well in the same way? More specifically, is well-being predicted by the same variables in different population groups, or is it possible to identify characteristic variations (Berdes & Zych, 2000; Lai & Macewan, 1995; Silveira & Allebeck, 2001)? Such investigation is particularly important in that aging is increasingly recognized as a multifaceted, multicultural phenomenon.

This article contributes to the knowledge base in this area of inquiry by examining the predictors of successful aging among three different population groups within Israeli society. Based upon data from a national survey, the inquiry compares the correlates of life satisfaction among veteran Jewish-Israelis, Arab-Israelis, and older new immigrants from the former Soviet Union. The analysis employs an outcome measure of life satisfaction that combines a global satisfaction rating with assessment of satisfaction from one's use of time. Potential correlates of the outcome measure are considered from among the primary factors associated with well-being in older adults: background and health status variables, social environment factors, and activity indicators.

BACKGROUND

Successful aging refers to the ability of individual members of the older population to remain integrated within social life, if it is their wish to do so, while maintaining the maximum functional capacity possible. It reflects continuity, social participation, and a state of personal well-being (Andrews, Clark, & Luszcz, 2002; Knight & Ricciardelli, 2003; Rowe & Kahn, 1998). The attainment of successful aging is frequently measured by the assessment of well-being. An outcome measure frequently employed toward this end is respondent's reported life satisfaction (Bowling, Farquhar, & Grundy, 1996; Chen, 2001; Hilleras et al., 2001; Ho et al., 1995).

Life satisfaction in later-life is associated with a range of background characteristics. Age, for example, generally demonstrates an inverse association with life satisfaction and with other well-being measures at the bivariate level. However, when factors such as health and socioeconomic status are taken into account, the relationship between age and well-being may turn positive (Chen, 2001; Uotinen, Suutama, & Ruoppila, 2003). Some analyses show no age differences in life-satisfaction, as for instance in a study of independent-living retirees in Pennsylvania (Hollis, 1998).

Gender also reveals some inconsistencies in the research literature. Meta-analysis of some 300 empirical studies indicated that older women reported significantly lower subjective well-being, but controlling for widowhood, health, and socioeconomic status decreased the gender differences (Pinquart & Sorensen, 2001). A study of life satisfaction among older African Americans found that women had a higher score than men (Coke, 1992) . In contrast, the Pennsylvania study cited earlier revealed no such gender differences (Hollis, 1998). Finally, a pooled sample from 65 societies revealed that there were indeed gender differences vis-a-vis life satisfaction, but these differences were masked by an interaction effect between age, gender, and well-being (Inglehart, 2002).

Income and education show more consistent positive associations with life satisfaction. For example, a study of community-living older individuals in the United States indicated that education and financial satisfaction significantly correlated with life satisfaction (Gray, Ventis, & Hayslip, 1992). Adequate income was also a predictive factor in two different studies of Asian elders (Chen, 2001; Ho et al., 1995). Structural equation modeling of data from a sample of persons age 55 and over clarified that higher educational attainment was related to lower levels of negative affect, which in turn resulted in greater life satisfaction (Meeks & Murrell, 2001).

Studies from around the world underscore the powerful association of health status and life satisfaction in later-life; the better one's health, the greater one's satisfaction (Bowling et al., 1996; Gee, 2000; Hilleras et al., 2001; Ho et al., 1995; Morgan & Bath, 1998). Moreover, a study of community-dwelling older adults revealed that the greater the number of chronic conditions, the lower one's life satisfaction (Jelicic & Kempen, 1999). Secondary analysis of data from the Alameda County Study showed that absence of chronic conditions was positively associated with successful aging, but many respondents with chronic conditions nevertheless rated themselves as aging successfully (Strawbridge et al., 2002).

The social environment of older people also influences their well-being. Marital status is a significant predictor of life satisfaction (Barrett, 1999). A panel study showed that life satisfaction was constant among men with stable marriages, but not among women. Decline in life satisfaction was evident due to loss of spouse, but more so among the men. On the other hand, a new spouse increased life satisfaction among men but not among women (Chipperfield & Havens, 2001). The effect of living arrangements also varies across different analyses. A study in Taiwan found living arrangement to have a profound impact on life satisfaction (Chen, 2001). However, a similar study of elderly Chinese Canadians found that living arrangements were not a significant predictor (Gee, 2000). Data from Hong Kong clarify that the effect of living arrangements on life satisfaction may depend upon the subjective quality of such arrangements (Ho et al., 1995).

The role of social contacts and social support in promoting life satisfaction in later life is a related theme in the research literature (Newsom & Schulz, 1996; Pinquart & Sorensen, 2000). Thus, for example, in the study of elderly

Chinese Canadians that was cited earlier, having friends or confidants was a better predictor of quality of life than living arrangements were (Gee, 2000). The importance of social contacts and support is particularly noted among older migrants. A study of life satisfaction in first-generation older Somali migrant men in England found that low family support in the face of increasing physical disability decreased life satisfaction (Silveira & Allebeck, 2001). However, other data question the contribution of social networks. Among people age 85 and over in the East End of London, for example, health and functional status accounted for most of the variation in the life satisfaction outcome, far more than the social network and support variables (Bowling et al., 1993).

Another aspect of the social environment that may affect well-being in later-life is one's connection to religious and social institutions. A study of older African Americans confirmed that participation in church activities was a significant predictor of life satisfaction (Coke, 1992). However, it is not yet clear what the primary religious factor in this realm is that contributes to life satisfaction: the social relational aspect of church attendance or the intrinsic religious activity (Ayele, Mulligan, Gheorghiu, & Reyes-Ortiz, 1999). Moreover, it cannot be entirely ruled out that the effect of church attendance found in some studies is due to the relationship of religious attendance with physical health (Barkan & Greenwood, 2003).

The activity theory of aging provides yet another set of potential predictors of life satisfaction (Schroots, 1996). Engagement in social activity is seen to bolster satisfaction in later-life (Chen, 2001; Dupuis & Smale, 1995; Morgan & Bath, 1998). Moreover, different types of activities have different benefits (Menec, 2003). Participation in hobbies and crafts and visiting friends, as well as a greater diversity of leisure activities, are positively related to greater psychological well-being (Dupuis & Smale, 1995). Other findings suggest, however, that the number of activities does not relate to well-being (Everard, 1999). Finally, a meta-analysis found that well-being is enhanced by volunteering (Wheeler, Gorey, & Greenblatt, 1998). Moreover, older volunteers experience greater increases in life satisfaction over time than younger volunteers, particularly at high rates of volunteering (Van Willigen, 2000).

Physical activity also contributes to well-being in later-life through its effect on health and its potentially social character. For example, an experimental study in which volunteers aged 60-81 years were randomly allocated to an aerobic exercise class or a health education group found that the exercise group had significantly greater life satisfaction (McMurdo & Burnett, 1992). However, a British study cited earlier revealed that the contribution of physical activity to psychological well-being was quite modest (Morgan & Bath, 1998).

Many of the studies that examine the correlates of life satisfaction in later life focus on majority populations or on specific ethnic or cultural groups. Comparisons across population groups vis-a-vis the satisfaction outcome are less prevalent. Such analysis is necessary in order to address the question as to whether

different populations age well in similar ways, or whether there are characteristic differences that stem from cultural and/or social sources.

In order to address this question, the following study considers the correlates of life satisfaction among three distinct population groups in the State of Israel: veteran Jewish-Israelis, Arab-Israelis, and new immigrants from the former Soviet Union. Veteran Jewish-Israelis constitute the majority of the Israeli population, in general, and of the elderly cohort in particular. Most of this population group immigrated to Israel before the founding of the State in 1948, or shortly thereafter. Of those born abroad, close to 70% came from Europe, America, or Oceania. Sixteen percent were born in Asia, and another 14% were born in Africa. About 11% of Israeli Jews age 65 and over were born in the region that now constitutes the State of Israel (Brodsky, Shnoor, & Be'er, 2003). The central theme of this grouping is that its members aged within Israeli society, as part of the emerging dominant Israeli culture.

Moreover, veteran Jewish-Israelis exhibit patterns of aging that are similar to other populations in Western-oriented societies. Thus, for example, disability rates in this population are higher for women, for older persons, and for those who suffer from chronic diseases (Fuchs et al., 1998). Women in this grouping rate their health as poorer than men (Prager, Walter-Ginzburg, Blumstein, & Modan, 1999). Social engagement with others outside the immediate family predicts lower risk of mortality (Walter-Ginzburg, Blumstein, Chetrit, & Modan, 2002). Finally, only a small part of this population actually engages in volunteering, but those who do have more positive psychosocial functioning (Shmotkin, Blumstein, & Modan, 2003).

Relatively little has been written to date regarding aging among Arabs in general (Salari, 2002), and among Arab-Israelis in particular (Azaiza & Brodsky, 1996; Bar-Tur, Savaya, & Prager, 2001; Lowenstein & Katz, 2000). Arab-Israelis comprise some 18% of the overall population in Israel, but only about 7% of persons age 65 and over (Brodsky et al., 2003). Almost two-thirds of Arab elderly are Muslims, about a quarter are Christians, and a tenth of them are Druze. They generally reside in culturally homogeneous localities and are mostly embedded in extended family networks (Litwin & Haj-Yahia, 1996). Filial obligation to elderly parents is an overarching norm in this population, but modernization and other urban influences have recently lessened the primacy of this social value (Litwin & Zoabi, 2003). Nevertheless, Arab-Israelis still reflect a primarily traditional culture.

The new immigrants considered in the current analysis are those who came from the Former Soviet Union since 1990, the year in which a mass exit of Russian Jews began (Katz & Lowenstein, 1999; Litwin, 1995a; Remennick, 2003). They are unique in Israeli society because they migrated late in life. Persons age 65 and over account for some 16% of all the Russian immigrants in the present wave (Brodsky et al., 2003). Moreover, elderly Soviet immigrants currently constitute about 20% of the older population in Israel. These immigrants differ

from earlier Russian immigrants to Israel in that they were more Sovietized in orientation when they arrived, and many came unwillingly, accompanying younger family members by default. They also experienced significant changes in the structure of their social networks after immigration (Litwin, 1997). The central theme of this population grouping is their having been uprooted in old age (Litwin, 1995b).

METHODS

The inquiry was based upon secondary analysis of data from a national survey of community-dwelling older people that was executed in 1997 by the Israeli Central Bureau of Statistics. The CBS survey took place in cities, towns, and villages having at least 2,000 inhabitants. All persons age 60 and over in the sampled households were interviewed by means of a structured questionnaire. For the current analysis, one respondent was randomly selected from each sampled household in order to guarantee independence of observations among the respondents.

The questionnaire addressed a range of variables that allowed for comprehensive consideration of the correlates of life satisfaction among the three population groups in question: veteran Jewish-Israelis (n = 2,043), Arab-Israelis (n = 609), and new immigrants from the former Soviet Union (n = 751). The total study sample numbered 3,043 respondents.

Study Variables

The outcome measure of life satisfaction considered in the current inquiry was derived from two separate questions on the CBS survey instrument. The first question asked for a global assessment, on a 4-point scale, of the degree to which respondents were satisfied with their lives; the higher the score, the greater the satisfaction. The second question queried respondents as to the degree to which they were satisfied with the ways in which they spent their time, again on a 4-point scale. Reliability analysis confirmed that joining these two scores produced an acceptable scale for each of the population groups under consideration (veteran Jewish-Israelis – α = .81; Arab-Israelis – α = .82; new immigrants – α = .75). The resultant life satisfaction scores ranged from 0 to 7 (M = 4.0, SD = 1.5).

The background variables addressed in the analysis included age, gender, income, education, and work status. Gender and work status were recorded as dichotomous nominal variables. Age was measured according to five-year categories, from 60-64 through 85-89, and one additional category for people age 90 and over (exact birth years were not made available in order to prevent the identification of respondents by unauthorized parties). Income was measured on a nine-category scale that ranged from a minimal income level of about $4,200 per year (in Israeli Shekels) to over $33,000 per year. Education was measured

on a five-category scale, ranging from 0 to four years of schooling to 16 years or more. The scale ranges for these and other variables are specified in Table 1.

Health status was addressed by three measures—ADL disability, comorbidity, and mental health. Difficulties in basic activities of daily living were measured on a five-item scale according to three levels: *able to perform the task with no difficulty whatsoever* (0); *able to perform the task but with difficulty* (1); and

Table 1. Background, Health, and Social Environment Characteristics among a Cohort of Older Israelis by Population Group: Means and Multiple Group Comparisons

| | Population group | | | |
Characteristics[a]	A Veteran Jewish-Israelis (M)	B Arab-Israelis (M)	C New immigrants (M)	Group differences
Background				
Age	3.1	3.1	3.2	—
Income	3.8	2.0	2.1	A – BC
Education	2.5	0.7	3.3	C – A – B
Gender (F)	0.5	0.5	0.5	—
Employed	0.2	0.1	0.1	A – BC
Health status				
ADL	0.8	2.7	1.0	B – CA
Comorbidity	1.6	1.9	1.4	B – AC
Mental health	0.2	0.1	0.2	—
Living arrangements				
Married	0.5	0.6	0.5	CA – B
Proximate children	1.4	5.0	1.0	B – A – C
Live alone	0.4	0.2	0.1	A – B – C
Social contact				
Children	2.6	3.1	1.4	B – A – C
Friends	2.3	3.2	2.5	B – CA
Neighbors	2.3	3.6	2.7	B – C – A
Place of worship	1.6	1.5	1.0	AB – C
Social club	0.4	0.3	0.6	C – AB

[a]Variable measurement: age (0-7), income (0-9), education (0-5), female gender (0-1), employed (0-1), disability (5-15), comorbidity (0-6), married (0-1), proximate children (0-10), live alone (0-1), contact with children (0-4), with friends (0-5), with neighbors (0-5), attendance at place of worship (0-4), at a social club (0-4).

unable to perform the task (2). The five ADL scale items included feeding oneself, bathing oneself, getting dressed, sitting in a chair and rising from it, and getting into and out of bed. The total score ranged from 0 to 10; the higher the score, the greater the difficulty (α = .94).

The comorbidity measure constituted a count of up to 12 medical conditions for which the respondent had ever been diagnosed: 1) high blood pressure, 2) coronary disease, 3) CVA, 4) diabetes, 5) asthma, 6) slipped disk, 7) cataract, 8) glaucoma, 9) cancer, 10) hip fracture, 11) osteoporosis, and 12) Parkinson's disease. The score on this variable reflects the number of illnesses suffered by each respondent. Finally, the mental health variable reflected whether the respondent had visited a mental health clinic in the previous six months. Those who did received a score of one, and those who did not received a score of zero.

Social environment was addressed in terms of respondents' living arrangements and their extent and range of social contacts. The living arrangements variables included marital status, the number of children in geographic proximity to the respondent (i.e., those who lived in the same locality), and whether or not the respondent resided alone. The social contact variables reflected the frequency of contact with children, friends, and neighbors, as well as the frequency of attending a synagogue, mosque, or church and the frequency of visiting a social club.

The final grouping of variables reflects the realm of inquiry generally addressed by activity theorists. These variables include the different ways in which older people typically spend their leisure time. They consist of such activities as reading books or newspapers, watching television, listening to the radio, playing cards, doing crafts, engaging in study, and going out on visits or trips. The frequency scales for each activity variable appear in Table 2.

Volunteering is another realm of productive aging activity that was addressed in the current analysis. It was measured by both a dichotomous dummy variable and by a frequency scale. Finally, engagement in physical activity by respondents was queried. The specific activities addressed included the frequency of taking walks, doing exercises, bicycling, swimming, and jogging. A total score in this area reflected the extent of diverse engagement in physical activity, the greater the score, the more physically engaged the respondent was.

Analysis

The analysis proceeded in several stages. First, univariate analysis clarified the central tendency of each of the study variables. Moreover, Scheffé tests of multiple group comparisons clarified the extent of group differences on each variable. These are summarized in Table 1 in the column labeled Group Differences; significantly different groups are separated by a dash. Next, the bivariate associations of respondents' life satisfaction scores with background, health, social environment, and activity variables were considered by means of Pearson's product-moment correlations. In the final stage, the life satisfaction score was

Table 2. Activity Variables and Life Satisfaction among a Cohort of Older Israelis by Population Group: Means and Multiple Group Comparisons

| Variables[a] | Population group | | | Group differences |
	A Veteran Jewish-Israelis (*M*)	B Arab-Israelis (*M*)	C New immigrants (*M*)	
Activity				
Read books	1.4	0.2	1.5	AC – B
Read newspaper	2.4	0.4	3.0	C – A – B
Watch TV	2.8	2.3	2.8	AC – B
Listen to radio	2.7	2.0	2.6	AC – B
Play cards	0.2	0.0	0.2	AC – B
Crafts	0.1	0.0	0.1	AC – B
Studies	0.1	0.0	0.1	AC – B
Going out	3.4	2.4	3.5	C – A – B
Volunteering				
Work	0.1	0.0	0.0	A – BC
Hours	0.2	0.0	0.1	A – CB
Physical activity				
Walks	0.9	0.1	0.9	CA – B
Exercise	0.5	0.0	0.7	CA – B
Bicycling	0.1	0.0	0.1	AC – CB
Swim	0.2	0.0	0.1	A – C – B
Jog	0.0	0.0	0.0	—
Total	0.5	0.0	0.5	AC – B
Life satisfaction	4.5	3.2	3.1	A – BC

[a]Variable measurement: read books (0-4), read newspaper (0-4), watch TV (0-3), listen to radio (0-3), play cards (0-1), crafts (0-1), studies (0-1), going out (0-4), volunteer work (0-1), volunteer hours (0-3), walks (0-4), exercise (0-4), bicycling (0-4), swim (0-4), jog (0-4), total physical activity (0-5), life satisfaction (0-7).

regressed, separately for each population group under consideration, on the respective study variables.

RESULTS

Table 1 reveals that the respective population groups differed on most, but not all the background, health, and social environment variables. The groups did not differ in terms of age and gender distribution. The average age for each

group fell within the ordinal category reflecting the 70–74 age range, and gender divided almost equally in each group. In contrast, the average income of new immigrants and Arab-Israelis was lower than the corresponding average income among veteran Jewish-Israelis (but not different from each other). In terms of education, the new immigrant group reported a higher educational level than the veteran Jewish-Israelis, while the Arab group reported a lower level. Moreover, fewer Arab-Israelis and new immigrants than veteran Jewish-Israelis were actively employed at the time of the survey.

The extent of ADL disability was rated as greater by Arabs than by new immigrants and by the veteran Jewish population. Arab-Israelis also reported greater comorbidity relative to the other populations. No differences emerged, on the other hand, regarding mental health. A similar minority of respondents in each population group visited a mental health clinic in the period preceding the survey.

In terms of living arrangements, Arab-Israeli respondents had a greater tendency than the new immigrants to reside with others in their households. The new immigrants had a greater tendency than veteran Jewish-Israelis to reside with others. In addition, fewer new immigrants were married than either Arab-Israelis or veteran Jewish-Israelis. The number of geographically proximate children was greatest among the Arabs, due probably to their higher fertility, and least among the immigrants.

In terms of social contact, Arab-Israelis met with their children most often, followed by veteran Jewish-Israelis. New immigrants had the lowest contact frequency. The Arabs also met with friends and neighbors more frequently than did new immigrants and veteran Israeli Jews. Both veteran Jewish-Israelis and Arab-Israelis attended a place of worship more frequently than the new immigrants. In contrast, the new immigrants attended a social club more frequently than did veteran Jewish and Arab-Israelis.

Table 2 presents the group differences regarding activity and life satisfaction. In general, Arab-Israelis engaged less in each of the activities considered: watching television, listening to the radio, reading books and newspapers, playing cards, engaging in crafts and study, and going out. The other respondent groups were largely indistinguishable on these same variables. On the other hand, Arab-Israelis and new immigrants both reported less participation in voluntary activity than the veteran Jewish-Israelis comparison group. The table also shows that engagement in physical activity was quite low for all three groups. Nonetheless, Arab-Israelis had a lesser degree of participation in such activity when compared to veteran Jewish-Israelis and new immigrants. As for life satisfaction, Arab-Israelis and new immigrants were indistinguishable from each other on the outcome measure, while veteran Jewish-Israelis reported a higher level of satisfaction.

The bivariate associations between life satisfaction and the background, health, and social environment characteristics are shown in Table 3. All the social contact

Table 3. Association of Background, Health, and Social Environment
Characteristics with Life Satisfaction by Population Group:
Pearson Correlations

Variables	Population group		
	Veteran Jewish-Israelis (R)	Arab-Israelis (R)	New immigrants (R)
Background			
Age	−.14**	−.09*	−.07
Income	.28***	.14**	.10**
Education	.18***	.19***	−.01
Gender (F)	−.15***	−.12**	−.08*
Employed	.15***	.11**	.06
Health status			
ADL	−.43***	−.47***	−.35***
Comorbidity	−.27***	−.33***	−.20***
Mental health	−.09***	−.04	−.08*
Living arrangements			
Married	.19***	.09*	.07
Proximate children	−.03	.06	−.00
Live alone	−.16***	−.02	.01
Social contact			
Children	.08**	.14***	.08*
Friends	.32***	.32***	.27***
Neighbors	.14***	.31***	.19***
Place of worship	.13***	.32***	.14***
Social club	.05*	.14***	.20***

*$p < .05$. **$p < .01$. *** $p < .001$.

variables were positively associated with life satisfaction among all three popu-
lation groups. Moreover, marital status was associated with life satisfaction among
veteran Jewish-Israelis and Arab-Israelis, but not among new immigrants. Living
alone was inversely related to life satisfaction among veteran Jewish-Israelis
only. The number of proximate children, on the other hand, had no association
with the outcome measure.

The health status variables were inversely associated with life satisfaction
among all three respondents groups, except for the mental health indicator among
Arab-Israelis. Background characteristics were also significantly related to life

satisfaction among veteran Jewish and Arab Israelis. Work status, income, and education level were positively related; age and female gender were inversely related. Among the new immigrants, on the other hand, only income and gender were associated with the outcome measure.

Table 4 reveals that just about all of the activity, volunteering and physical activity variables, were positively associated with life satisfaction among the veteran Jewish-Israelis. New immigrant respondents also demonstrated a high degree of association on most of these variables. For Arab-Israelis, on the other hand, life satisfaction was associated with many but not all of the activity variables.

In the multivariate stage of the analysis, the life satisfaction scores for veteran Jewish-Israelis, Arab-Israelis, and new immigrants were regressed on each of the study variables. As Table 5 demonstrates, some of the predictors of life

Table 4. Association of Activity and Life Satisfaction by Population Group:
Pearson Correlations

Variables	Population group		
	Veteran Jewish-Israelis (R)	Arab-Israelis (R)	New immigrants (R)
Activity			
Read books	.22***	.13**	.07
Read newspaper	.21***	.17***	.13***
Watch TV	.12***	.22***	.14***
Listen to radio	.16***	.14**	.10**
Play cards	.12***	.04	.15***
Crafts	.09***	.02	.09*
Studies	.14***	.05	.08*
Going out	.35***	.47***	.26***
Volunteering			
Work	.17***	.10*	.09*
Hours	.17***	.09*	.06
Physical activity			
Walks	.23***	.14**	.20***
Exercise	.12***	.03	.07
Bicycling	.08***	.10*	.09*
Swim	.15***	.07	.15***
Jog	.03	.07	.04
Total	.25***	.15***	.20***

*$p < .05$. **$p < .01$. *** $p < .001$.

Table 5. Significant Predictors of Life Satisfaction by Population Group: Multiple Regression Analysis

Predictors	Population group		
	Veteran Jewish-Israelis (Beta)	Arab-Israelis (Beta)	New immigrants (Beta)
Age	.07**	.06	.07
Income	.08**	−.02	.09*
Education	−.05	.05	−.08
Gender (F)	−.05*	.07	.03
Employed	.03	.02	.01
ADL	−.27***	−.20***	−.24***
Comorbidity	−.13***	−.10**	−.09*
Mental health	−.05*	−.03	−.05
Married	−.01	−.05	.01
Proximate children	.00	.06	−.00
Live alone	−.12**	.03	−.05
Contact with children	.05*	.08	.03
Contact with friends	.12***	.07	.16***
Contact with neighbors	.05**	.13**	.12**
Place of worship	.04	.07	.07
Social club	.04	.03	.08*
Read books	.07**	.02	−.02
Read newspaper	−.04	.04	−.02
Watch TV	.01	.07	.06
Listen to radio	.03	−.03	.02
Play cards	.00	−.05	.05
Crafts	.05*	−.01	.05
Studies	.03	.04	−.01
Going out	.05*	.23***	−.01
Volunteer work	.03	.04	.14
Volunteer hours	.04	−.03	−.11
Walks	.04	—	.17
Exercise	.01	−.04	.10
Bicycling	−.01	.08	.06
Swim	.03	—	.07
Jog	−.01	−.11	.02
Total physical activity	.05	.12*	−.15
R^2	.32	.38	.25
F	27.47***	10.72***	7.13***

*$p < .05$. **$p < .01$. *** $p < .001$.

satisfaction proved to be similar across groups, but several were different in composition and in strength of association.

Veteran Jewish-Israelis had the largest set of predictors. Strongest among them was the inverse association of disability and comorbidity. Next in strength were the positive association of contact with friends and the inverse association of living alone. Reading books was also positively related. Among the background variables, age and income retained a positive association with the outcome measure. Weaker associations were evident between life satisfaction and contact with children and with neighbors, engaging in crafts, and going out on visits or trips. A weak inverse association was also evident between the mental health variable and the life satisfaction outcome measure. The collection of predictor variables explained 32% of the variance in the life satisfaction scores among the veteran Jewish-Israelis.

A somewhat greater amount of explained variance in the outcome measure was achieved among Arab-Israelis (38%) by a narrower set of variables. The strongest predictor was going out on visits or trips; the more frequently respondents went out, the greater their life satisfaction. Disability level was inversely related to the satisfaction outcome, as was the comorbidity measure to a lesser degree. Frequency of contact with neighbors was third in predictive strength among the variables, followed by the total physical activity score. Compared to the veteran Jewish-Israelis, life satisfaction among the Arab-Israeli respondents was not influenced by sociodemographic characteristics, by living arrangements, or by participation in solitary activity, such as reading books or doing crafts.

The strongest predictor of life satisfaction among new immigrants was disability level; the greater the disability reported, the less the degree of satisfaction. Three social contact variables achieved significant positive associations with life satisfaction in this population group: frequency of contact with friends and with neighbors, and frequency of attendance at a social club. Finally, income was the only background variable to predict life satisfaction among new immigrants, and its association was positive. The collection of predictors identified in this last round of analysis accounted for 25% of the variance in the life satisfaction scores of the older new immigrants from the former Soviet Union.

DISCUSSION

This study sought to compare the differing predictors of successful aging, as measured by life satisfaction, among three different population groups in Israel. Initial analysis revealed that the three groups differed in their extent of life satisfaction. The majority veteran Jewish-Israelis had significantly greater satisfaction than both Arab-Israelis and new immigrants from the former Soviet Union who arrived in Israel in later-life.

The veteran Jewish-Israelis also had higher incomes and more of them were still actively employed. Arab-Israeli elders had the least education and poorer

health but reported, having the strongest social environment among the three groups. They had the greatest number of proximate children and the most frequent contact with children, friends, and neighbors. The new immigrants differed from the other two groups primarily in that they had the highest education level, the smallest number of proximate children, and the greatest degree of attendance at a social club.

Thus, veteran Jewish-Israelis had the most privileged social situation, objectively speaking. The Arab minority was at greater risk in terms of social and health status, but was compensated for this partly through the maintenance of more extensive social networks. The immigrants, on the other hand, enjoyed neither privileged social status nor extensive informal support. Their greater attendance at a formal social club testifies, moreover, as to the tenuous social environment in which they could expect to spend their later years (Litwin, 1999).

In terms of activity, Arab-Israelis engaged least frequently in just about all types of diversion. Veteran Jewish-Israelis and new immigrants, on the other hand, engaged in most activities to about the same degree, except for volunteering in which the latter participated less. While some inter-group differences were evident across the three groups in the extent of engagement in physical activity, the major finding in this particular area was the limited degree to which anyone participated in physical activity. The literature reports that elderly Americans also hardly engage in regular exercise-oriented activity, on the whole (Crespo, Keteyian, Heath, & Sempos, 1996; Rowe & Kahn, 1998. Thus, the older Israeli cohort is not unusual in its sedentary tendencies.

The bivariate analysis in the current study revealed that almost all the study variables were associated with life satisfaction in similar ways across groups. However, the multivariate analysis further clarified that a select number of variables predicted the satisfaction outcome. Several of the resultant predictors were similar across groups but others differed in meaningful ways. The findings suggest that there are different paths to successful aging among different population groups.

As noted, veteran Jewish-Israelis had the greatest number of predictors of life satisfaction, but the health status variables emerged as the strongest ones. This is interesting in that veteran Jewish-Israelis also reported having the best health compared to the other groups. Thus, it seems that objective and subjective factors converged among the majority population in Israel in determining successful aging. In addition, frequent contact with friends and not living alone were counted among the stronger predictors of life satisfaction in this population group. These latter factors reflect a stable population that can afford to make choices regarding social relationships. The positive association of income and life satisfaction in the majority group further reinforces this latter interpretation.

Among Arab-Israelis, the health variables were also major predictors of the satisfaction outcome. However, the strongest single predictor was the frequency of going out on visits or trips. When combined with another major

predictor—frequency of contact with neighbors—it seems that communal visitation constitutes a primary base for life satisfaction in this population. The absence of an effect of sociodemographic background variables on the life satisfaction of Arab-Israelis further reinforces this conclusion. Stated differently, it seems that successful aging among elderly Arabs in Israel was mostly a function of the quality of their communal environment. This was the case in spite of their having objectively lower social and health status in the larger society, and independently of it.

Comparing the two groups discussed thus far raises the possibility that successful aging is variously shaped by individualistic and collectivistic values, depending upon the population group in question (Efklides, Kalaitzidou, & Chankin, 2003; Torres, 2002). Thus, as in other Western societies, life satisfaction among veteran Jewish-Israelis was mainly a function of independence and health (Tate, Lah, & Cuddy, 2003). However, for Arab-Israelis, life satisfaction was largely the product of social visitation. That is, being involved in one's communal structure defines successful aging among Arab-Israelis, regardless of one's state of health.

The correlates of life satisfaction among the new immigrant group present a third unique set of predictors. As in the two previously discussed population groupings, health status was an important concomitant of successful aging among the elderly newcomers from the Former Soviet Union. Also of major import was social contact with a range of ties. Life satisfaction in this population was predicted by frequency of contact with friends, contact with neighbors, and attendance at a formal social club. Thus, it seems that successful aging among new immigrants who reach their host society in later-life is influenced by the degree to which they can surround themselves with social ties beyond those available from the immediate family. Such ties even include the formally instigated social contacts that are characteristic of public senior centers. Income emerged as a significant predictor in this group as well, indicating that material concerns may also underlie successful aging among transient populations.

It should be noted, at the same time, that the new immigrants had the smallest amount of explained variance in the life satisfaction outcome scores among the three groups considered in this analysis. Immigration in old age erases previous attainments based on status, language, and culture (Litwin, 1995b). As a result, later-life immigrants become less distinguishable one from another. This may explain the more limited ability to predict successful aging among persons who change countries in old age.

The findings from this comparative analysis suggest that the correlates of successful aging are partly universal and partly population-specific. In the current study, background characteristics proved to be largely predictive among the majority population of veteran Jewish-Israelis, partly so among the new immigrants, and not predictive at all among Arab-Israelis. In contrast, health status was universally predictive of the life satisfaction outcome in all three study

populations. Indeed, functional health is a central component of successful aging according to a leading definition of the phenomenon (Rowe & Kahn, 1998).

The category of social environment was also predictive of life satisfaction across the three study groups, but a different collection of social network indicators stood out in each case. As recalled, satisfaction among veteran Jewish-Israelis was correlated with contact with friends, and to a lesser degree, with children and neighbors. Among Arab-Israelis, contact with neighbors was the only correlate, while among the new immigrants contact with friends, neighbors, and a social club were the relevant predictors. These findings suggest that social network relationships are a key component of successful aging, but they work in different ways for different population groups.

The set of activity variables proved to be of less significance in predicting successful aging, on the whole. A few solitary activities (reading books and doing crafts) were correlated with life satisfaction, but only among veteran Jewish Israelis. Among Arab-Israelis, on the other hand, going out on visits and trips was the strongest overall predictor of life satisfaction among all the study variables, including health status. Going out also correlated with life satisfaction among veteran Jewish Israelis, but to a much lesser degree. Physical activity correlated with the satisfaction outcome among Arab-Israelis only. Finally, the new immigrant group had no activity predictors of successful aging. Apparently the trials of absorption into a new society make the question of meaningful daily activity less relevant in defining the quality of old age.

Volunteering did not emerge in this analysis as a significant correlate of life satisfaction, in contrast to related findings from another Israeli study (Shmotkin et al., 2003). This may be due to the small number of respondents reporting involvement in such activity. However, the lack of correlation may also suggest that the act of volunteering is not a crucial factor in successful aging. Rather, it may be the other characteristics that are associated with both volunteering and life satisfaction that account for the differences in the outcome variable. Chief among them are health and income, which tend to promote voluntary activity, as well as aging well.

In sum, this analysis underscores the universal basis of successful aging. However, it also clarifies that the specific components of some of the general categories of predictors work in different ways among different population groups. More comparative research in different societies is warranted in order to substantiate the major paths to a good old age and to distinguish the unique determinants of successful aging in different populations.

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